

ABSTRACT OF THE DISCLOSURE

The invention is a catalytic device comprised of a catalyst support of fused ceramic grains and a catalyst that is surface-bound to at least a portion of the ceramic grains, incorporated into at least a portion of the ceramic grains or combinations thereof, wherein the grains and catalyst form a surface structure that has a box counting dimension of greater than 1.00 or the box counting dimension has at least one step change when measured from a box size "d" of at least about 1 micrometer to at most about 1 millimeter. The invention is particularly useful in making a catalytic converter or catalytic converter-soot trap.